

**Abstract of the Disclosure**

A method of color printing is described in which only two transparent inks are used to reproduce a source image. The original digitally encoded image in red, green and blue colors may be initially adjusted for contrast, brightness, color balance, and tonal value. This is then converted to cyan, magenta and yellow encoding. The two of these channels which best represent the dominant colors of original image are then selected. The critical colors of the original image to be reproduced with reasonable accuracy are determined and spot colors that best represent these are selected from an ink palette. The spot colors are assigned to the selected channels to which they have the closest color relationship. These two channels are next superimposed to form a composite image and their greyscale values are adjusted to produce an image most closely resembling the desired final image. New positive separations are then made and inverted to negative images from which printing plates can be prepared. A third channel may be introduced approximating the color of a colored substrate before the final greyscale adjustment.

This channel is not printed, however. An additional procedure useful with colored substrates is to prepare a masking channel which will deposit an opaque ink, usually white, to underlie the two transparent inks and further help control substrate color. Under this implementation, the third channel is printed. The method is capable of rendering very attractive color images on substrates such as the unbleached kraft paper used for corrugated shipping containers